BASIS FOR THE AMENDMENT

Claims 1-37 are active in the present application. Claims 36 and 37 are new claims. Support for the new claims is found on page 31, lines 5-8.

No new matter is believed to have been added by this amendment.

REMARKS

Applicants thank Examiner Goodrow for the helpful and courteous discussion of May 13, 2005.

The Office rejected Claims 21-34 as anticipated in view of any one of Fujimaki (U.S. 4,898,799); Kinoshita (U.S. 5,753,395); or Nukada (U.S. 6,268,096). It appears that the Office is alleging that the crystal or crystal form of at least one prior art phthalocyanine crystal is the same as the phthalocyanine crystal of the electrophotographic photoreceptor of independent Claim 21.

Applicants submit that the titanylphthalocyanine crystal of the present claims is different from the prior art crystals. Applicants submit that this difference is evident in the X-ray diffraction spectrum of the crystal of the present claims in comparison to the X-ray diffraction spectrum of the prior art crystals. As recited in present independent Claim 1 the claimed photographic photoreceptor has a charge generation layer comprising a titanylphthalocyanine crystal having peaks at a Bragg 2θ angle of 7.3°, 9.4°, and 9.6°, no peak between the peaks at 7.3° and 9.4°, and any minimum interval between the 7.3° and 9.4° peaks is 2.0° absolute. The peak positions in the present claims are provided with a precision of ± 0.2°.

The titanylphthalocyanine crystal recited in the present claims is a specific polymorph of a titanylphthalocyanine crystal. Even though the titanylphthalocyanine crystal of the present invention may have the same chemical formula, the titanylphthalocyanine crystal recited in the present claims is different from other polymorphs of titanylphthalocyanine crystals. Polymorphism is a phenomenon in which a substance may exhibit different forms (e.g., different crystalline forms). Applicants submit that it is readily recognized by those of ordinary skill in the art that different polymorphs of the same substance may exhibit different properties such as X-ray diffraction spectra. The distinctness of the polymorph of the

titanylphthalocyanine crystal recited in the present claims is evidenced by its X-ray diffraction spectrum and its criticality is discussed in the comments below.

The X-ray diffraction spectra of the prior art inventive titanylphthalocyanine crystals is presented as Figures 7 and 8 in Kinoshita (column 3, lines 30-31). The X-ray diffraction spectra of other prior art titanylphthalocyanine crystals are provided as Figures 9-11. A simple visual inspection of the figures of Kinoshita is sufficient to demonstrate that the prior art titanylphthalocyanine crystals do not exhibit an X-ray diffraction spectrum having peaks at 7.3, 9.4 and 9.6°. In fact, each of Figures 7-11 appear to show only a single peak in the region of from 8 to 10°. Thus the requirement of the claimed crystal to show peaks at both 9.4 and 9.6° is not met by the titanylphthalocyanine crystals of Kinoshita.

Nukada provides X-ray diffraction spectra of the prior art invention titanylphthalocyanine crystals as Figures 1-9. X-ray diffraction spectra of other titanylphthalocyanine crystals are presented as Figures 15, 17 and 19. It is evident from a visual inspection of the figures of Nukada that the prior art titanylphthalocyanine crystals do not have an X-ray diffraction spectra which includes peaks at 7.3, 9.4 and 9.6°. Therefore, the titanylphthalocyanine crystal of Nukada does not fulfill the requirements of the titanylphthalocyanine crystal recited in the present independent claims.

Fujimaki also does not disclose a titanylphthalocyanine crystal having the X-ray diffraction spectrum of the titanylphthalocyanine crystal recited in the present claims. Figure 1 of Fujimaki shows the X-ray diffraction spectrum of the prior art titanylphthalocyanine crystal (column 3, lines 7-8). The Fujimaki titanylphthalocyanine crystal appears to have several peaks in the region between 7 and 10°. A close inspection of the X-ray diffraction spectrum of Fujimaki provides evidence that the Fujimaki titanylphthalocyanine crystal does not meet the present claim limitations. Exhibit A attached herewith provides a portion of the X-ray diffraction spectrum of Figure 1 of Fujimaki that is enlarged by 350%. It appears that

two peaks are present in the region between 7.0 and 8.0°. Applicants submit that one can readily determine that one peak appears below 7.5° whereas the other peak appears above 7.5°. If one assumes that the peak appearing below 7.5° corresponds with the peak at 7.3° of the titanylphthalocyanine crystal of the present claims (i.e., the minimum peak), then the peak appearing above 7.5° is a peak that appears between a peak at 7.3° and 9.4°. Therefore, the X-ray diffraction spectrum of Fujimaki shows that the prior art titanylphthalocyanine crystal is unable to meet the present claim limitations which require the presence of a titanylphthalocyanine crystal where no peak is observed between the 7.3° and 9.4 peaks at a minimum interval of 2.0° absolute or more.

The X-ray diffraction spectra of each of Kinoshita, Nukada and Fujimaki, do not meet the requirements of the present claims.

Therefore, the titanylphthalocyanine crystal of the present claims is different from the titanylphthalocyanine crystal of each of Kinoshita, Fujimaki and Nukada and thus the prior art relied upon by the Office cannot anticipate the present claims.

Applicants respectfully request the withdrawal of the rejections.

The Office further rejected Claims 1-20 and 35 under the 35 U.S.C. §103(a) in view of the combination of Park (U.S. 6,253,037) and Fujimaki. The Office asserts that it would be obvious to use the titanylphthalocyanine recited in independent Claim 1 in the image transfer environment of Park because Fujimaki discloses that the titanylphthalocyanine has major peaks similar to the titanylphthalocyanine of the claims. As already discussed above, the titanylphthalocyanine of the present claims is different from the titanylphthalocyanine crystal of Fujimaki, Nukada and Kinoshita. The prior art of record does not disclose a titanylphthalocyanine crystal having the X-ray diffraction pattern of the titanylphthalocyanine crystal of the present claims. Therefore, the prior art cannot anticipate or render obvious the

claimed invention because not all of the present claim elements are disclosed or suggested by the prior art.

Applicants submit that the inclusion of a titanylphthalocyanine crystal meeting the requirements of the present claims in a charge generation layer will provide an electrophotographic image forming apparatus that is not obvious in view of the electrophotographic image forming apparatus of Park even if a titanylphthalocyanine crystal having similar X-ray diffraction pattern peaks is used in the charge generation layer.

Applicants synthesizes a number of titanylphthalocyanine crystals in the Synthesis Examples on pages 66-74 of the specification. Table 2 of the specification provides a summary of the peak positions of each of the titanylphthalocyanine crystals. At least synthesis Examples 2-7 do not meet the present claim limitations. As shown in the table below those characteristics of the synthesis examples which do not meet the required titanylphthalocyanine crystal characteristics of the present claims are shaded in the table.

Table 2

	Max. Peak	Min. Peak	9.4° Peak	9.6° Peak	Peak from 7.4 to 9.4°	26.3° Peak
Syn. Ex. 1	27.2°	7.3°	Available	Available	Not available	Not available
Syn. Ex. 2	27.2°	7.3°	Not available	Not available	Not available	Not available
Syn. Ex. 3	27.2°	9.6°	Available	Available	Not available	Not available
Syn. Ex. 4	27.2°	7.4°	Not available	Available	Not available	Not available
Syn. Ex. 5	27.2°	7.3°	Available	Available	Available (7.5°)	Not available
Syn. Ex. 6	27.2°	7.5°	Not available	Available	Available (7.5°)	Not available
Syn. Ex. 7	27.2°	7.4°	Not available	Not available	Available (9.2°)	Available
Syn. Ex. 8	27.2°	7.3°	Available	Available	Not available	Not available

(Shaded cells are outside present claim limitations)

The titanylphthalocyanine crystals prepared in the synthesis examples were used to prepare a number of photoreceptors having charge generation layers such as those of the present claims. The photoreceptors were compared for their image forming performance. A summary of the comparative data is provided in Table 3 on pages 78 and 79 of the specification and reproduced below for convenience.

Table 3

	Photo-receptor	Pigment	Transfer current (μA)	Image Evaluation	
				Hollow images	Background fouling
Ex. 1	**Prod. Ex. 1**	**Syn. Ex. 1**	75	○	○
Ex. 2	**Prod. Ex. 8**	**Syn. Ex. 8**	75	○	◎
Ex. 3	**Prod. Ex. 9**	**Syn. Ex. 1**	75	○	◎
Ex. 4	**Prod. Ex. 10**	**Syn. Ex. 1**	75	○	◎
Ex. 5	**Prod. Ex. 11**	**Syn. Ex. 1**	75	○	○
Com. Ex. 1	**Prod. Ex. 2**	**Syn. Ex. 2**	75	○	×
Com. Ex. 2	**Prod. Ex. 3**	**Syn. Ex. 3**	75	○	×
Com. Ex. 3	**Prod. Ex. 4**	**Syn. Ex. 4**	75	○	×
Com. Ex. 4	**Prod. Ex. 5**	**Syn. Ex. 5**	75	○	×
Com. Ex. 5	**Prod. Ex. 6**	**Syn. Ex. 6**	75	○	×
Com. Ex. 6	**Prod. Ex. 7**	**Syn. Ex. 7**	75	○	×
Com. Ex. 7	**Prod. Ex. 1**	**Syn. Ex. 1**	60	×	○
Com. Ex. 8	**Prod. Ex. 2**	**Syn. Ex. 2**	60	×	△
Com. Ex. 9	**Prod. Ex. 3**	**Syn. Ex. 3**	60	×	×
Com. Ex. 10	**Prod. Ex. 4**	**Syn. Ex. 4**	60	×	×
Com. Ex. 11	**Prod. Ex. 5**	**Syn. Ex. 5**	60	×	△
Com. Ex. 12	**Prod. Ex. 6**	**Syn. Ex. 6**	60	×	△
Com. Ex. 13	**Prod. Ex. 7**	**Syn. Ex. 7**	60	×	×
Com. Ex. 14	**Prod. Ex. 8**	**Syn. Ex. 8**	60	×	◎
Com. Ex. 15	**Prod. Ex. 9**	**Syn. Ex. 1**	60	×	◎
Com. Ex. 16	**Prod. Ex. 10**	**Syn. Ex. 1**	60	×	◎
Com. Ex. 17	**Prod. Ex. 11**	**Syn. Ex. 1**	60	×	○

As was mentioned above, Synthesis Example 1 meets the present claim limitations. Production Examples 2-8 are photoreceptors that are made from titanylphthalocyanine crystals such as those of Synthesis Examples 2-8. It is readily apparent from Table 3 that the image evaluation properties of a photoreceptor having a charge generation layer containing a titanylphthalocyanine crystal meeting the present claim limitations is substantially better than the image formation properties of a photoreceptor containing a titanylphthalocyanine crystal that does not exhibit the X-ray diffraction pattern.

Applicants submit that the information of Tables 2 and 3 of the present specification demonstrates that different titanylphthalocyanine crystals may have different image forming properties and the X-ray diffraction spectrum is therefore a critical indicator of the crystal properties.

Applicants submit that the subject matter of Claims 1-20 and 35 is not obvious in view of the prior art cited by the Office at least because (i) the prior art does not disclose or suggest a titanylphthalocyanine crystal having the X-ray diffraction pattern of the present claims and (ii) Applicants have shown that a photoreceptor adhering to the present claim limitations is able to provide significantly superior image formation properties in comparison to photoreceptors that contain titanylphthalocyanine crystals that do not meet the present claim limitations.

Applicants respectfully request the withdrawal of the rejections on the grounds that the present claims are not obvious in view of the prior art cited by the Office.

The Office further rejected Claims 1-35 under obviousness-type double patenting in view of co-pending applications 10/454,556 and 10/656,806. Each of the obviousness-type double patenting rejections is a provisional rejection because neither of the co-pending applications has yet issued as a patent. Applicants request the Office enter any obviousness-type double patenting rejection in the co-pending applications upon determining that the

present claims are patentable. Applicants submit that this is in conformance with U.S. PTO patent practice and draw the Office's attention to M.P.E.P. §804(I)(E) where it is stated:

> If the "provisional" double patenting rejection in one application is the only rejection remaining in that application, the examiner should then withdraw that rejection and permit the application to issue as a patent, thereby converting the "provisional" double patenting rejection in the other application(s) into a double patenting rejection at the time the one application is used as a patent.
>
> If the "provisional double patenting rejections in both applications are the only rejections remaining in those applications, the examiner should then withdraw that rejection in one of the applications (e.g., the application with the earlier filing date) and permit the application to issue as a patent. The examiner should maintain the double patenting rejection in the other application as a "provisional" double patenting rejection which will be converted into a double patenting rejection when the one application issues as a patent.

Applicants respectfully request the withdrawal of the obviousness-type double patenting rejections in the present case and the allowance of the present claims and issuance of a patent.

Respectfully submitted,

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EXHIBIT A

OIPE JC25
JUN 0 1 2005
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